September-11-14 11:55:44 AM

Item ID:	D3580-3		Accept	*N9000401 00*	Setup	Start	*NS1*
Revision ID:						Stop	*NS2*
Item Name:	Joggle Bracket						

Start Date:	9/30/14	Start Qty:	12.00	*12*	Cust Item ID:		
Required Date:	9/30/14	Req'd Qty:	12.00	*12*	Customer:		
Reference:							

						Run	Start	*NR1*
Approvals:	Process Plan: MLJ	Date: 14-09-12	Tooling: _____	Date: _____			Stop	*NR2*
	QC: _____	Date: _____	SPC (Y/N): _____	Date: _____				

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D3580	C								
100 *100* Waterjet FLOW CNC Waterjet	FLOW WATER JET **Memo** 1-Cut D3580-1F as per Dwg Dwg Rev: C Prog Rev: C 2-Deburr if necessary	0.00 0.00				(30)			EL/DC 14/09/30
110 *110* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB **Memo**	0.00 0.00				(30)			EL/DC 14/09/30
120 *120* QC Quality Control	QC8- Inspect parts - second check **Memo**	0.00 0.00				(30)			DAS 38 9-89 14-10-01

DQA: _____ Date: _____

QA Closed: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

Work Order update only ☐

Work Order: _____	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**			
Part No. _____	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
NCR No. _____	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function

- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence

- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge

- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____
_____
_____

Item ID:	D3580-3		Accept	*N900040100*	Setup	Start	*NS1*
Revision ID:							
Item Name:	Joggle Bracket					Stop	*NS2*
Start Date:	9/30/14	Start Qty: 12.00	*12*		Cust Item ID:		
Required Date:	9/30/14	Req'd Qty: 12.00	*12*		Customer:		
Reference:							

Approvals:	Process Plan: _____	Date: _____	Tooling: _____	Date: _____	Run	Start	*NR1*
	QC: _____	Date: _____	SPC (Y/N): _____	Date: _____		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Small Fab Small Fab	Small Fab Memo Bend as per dwg D3580 using 1/8" offset die	0.00 0.00		DAS 28 9-89	DAS 30 9-89	30	OCT 0 8 2014		
140 *140* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				(30)		DAS 38 9-89	14-10-8
145 *145* Powdercoat Powder Coating	Black Sandtex(Ref:4.3.5.7) per QSI005 4.3 M 127892 Memo START TIME: 2:15 OVEN TEMPERATURE: 320 FINISH TIME: 2:45	0.00 0.00				30	0	14-10-8.	DAS 34 9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____ Date: _____   Work Order update only ☐

Work Order: _____	**DISPOSITION**		**AGAINST DEPARTMENT/PROCESS**			

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐   Crosstube ☐   Water Jet ☐   Engineering ☐
Machining ☐   Small Fab ☐   Prod. Eng. Coor. ☐   Quality ☐
Thermoforming ☐   Finishing ☐   Rec/Store/Packaging ☐   Other ☐
Large Fab ☐   Composite ☐   Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

_____
_____
_____

Item ID:	D3580-3		Accept	***N9000401nn***	Setup	Start	***NS1***
Revision ID:							
Item Name:	Joggle Bracket					Stop	***NS2***

Start Date:	9/30/14	**Start Qty:**	12.00	***12***	**Cust Item ID:**		
Required Date:	9/30/14	**Req'd Qty:**	12.00	***12***	**Customer:**		
Reference:							

						Run	Start	***NR1***
Approvals:	**Process Plan:** _____	**Date:** _____	**Tooling:** _____	**Date:** _____				
	QC: _____	**Date:** _____	**SPC (Y/N):** _____	**Date:** _____		Stop	***NR2***

Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
147 ***147*** QC Quality Control	QC3- Inspect Part Finish	Memo	0.00 0.00				(30)	_____	_____	DAS **38** 9-89 14-10-10
148 ***148*** QC Quality Control	QC5- Inspect part completeness to step on W/O	Memo	0.00 0.00				(30)	_____	_____	DAS **38** 9-89 14-10-10
150 ***150*** Packaging Packaging	Identify as per dwg & Stock Location: S+050	Memo	0.00 0.00				(30)	_____	MLJ	14-10-10

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____ Date: _____   Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Crosstube	☐	Water Jet	☐	Engineering ☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐	Quality ☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other ☐
Large Fab	☐	Composite	☐	Supplier	☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function

- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence

- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge

- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____
_____
_____

		Accept	***N900040100***	Setup	Start	***NS1***

Item ID: D3580-3

Revision ID:

Item Name: Joggle Bracket   Stop   ***NS2***

Start Date: 9/30/14   **Start Qty:** 12.00   ***12***   **Cust Item ID:**

Required Date: 9/30/14   **Req'd Qty:** 12.00   ***12***   **Customer:**

Reference:

Approvals: **Process Plan:** _____ **Date:** _____   **Tooling:** _____ **Date:** _____   Run   Start   ***NR1***

                 QC: _____ **Date:** _____   **SPC (Y/N):** _____ **Date:** _____   Stop   ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 ***160*** QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00					14/10/14		

MLJ 14-10-10

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____ Date: _____   Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	**DISPOSITION** Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	**AGAINST DEPARTMENT/PROCESS**

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function

- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence

- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge

- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____
_____
_____

Picklist Print

September-11-14 11:55:44 AM

Work Order ID: 124133

124133

D3580-3

Parent Item: D3580-3

Parent Item Name: Joggle Bracket

Start Date: 9/30/14   **Required Date:** 9/30/14

Start Qty: 12.00   **Required Qty:** 12.00

Comments: IPP REV:A   14.07.03   NEW ISSUE   DD   VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S18GA		Purchased	No				sf	351.3100		0.113684 -24			
M304S18GA									**			Dc 14/09/30	
304/316 .050 Sheet													

Location	Loc Qty	Loc Code
MAT019	340.51	
117188	3	
117766	5	
120604	5	
122325	3	
123155	3	
124572	37.5	
M126647	31.55	
M128254	52.71	
M128435	36.95	
M128864	15	
M129530	147.8	
MAT020	10.8	
124029	0.8	(4)
M126098	10	

WORK ORDER NON-CONFORMANCE / UPDATE
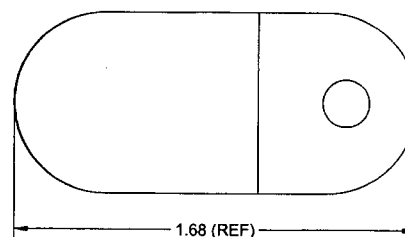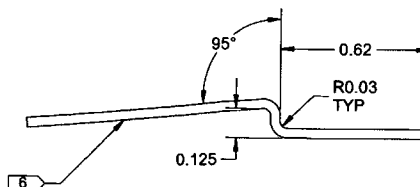
DART AEROSPACE

Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

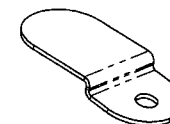|			
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

_____
_____
_____

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.194	+0.005/-0.001	Ø .194	✓			
0.294	+/-0.010	.294	✓			
1.75	+/-0.030	1.75	✓			
0.75	+/-0.030	.75	✓			
0.050	+/-0.010	.047	✓			

Measured by:	Dc /EZ	Audited by:	28 9-89	Preliminary Approval:	
Date:	14/09/30	Date:	14-10-01	Date:	

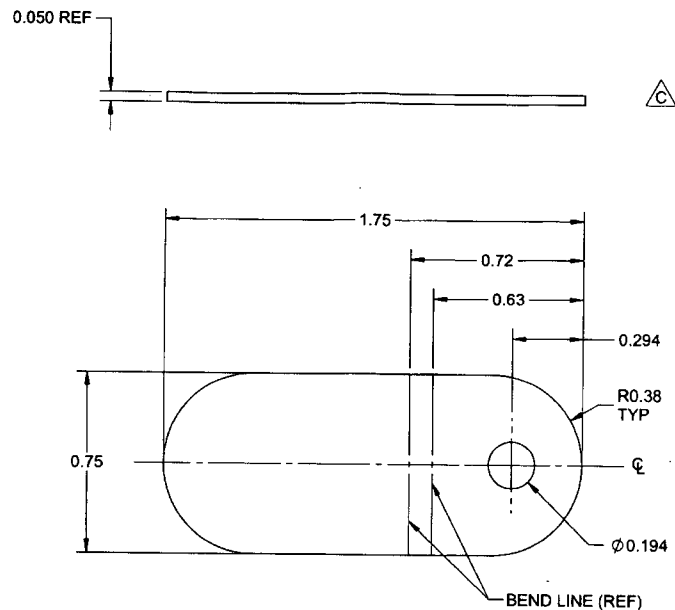| Rev	Date	Change		Revised by	Approved
A	14.07.14	New Issue		KJ	

95°

0.62

R0.03
TYP

0.125

6

1.68 (REF)

D3580-1 JOGGLE BRACKET

NOTES:
1) MATERIAL: MADE FROM D3580-1F
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1 ON THE UNDERSIDE OF THE PART AS INDICATED
7) WEIGHT: 0.01 lbs

REV.	DESCRIPTION		BY	DATE
C	UPDATED DWG FORMAT. ADDED D3580-3 (ZN B5-3) AND D3580-5 (ZN B5-4). ADDED SIDE VIEW TO D3580-1F (ZN D5-2)		AK	14.02.12
B	REMOVE POWDER COAT		CB	07.07.09
A	NEW ISSUE		CB	07.05.15

APPROVED			
DESIGN	AK	**DART AEROSPACE LTD**	
DRAWN	AK	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D3580	SHEET 1 OF 4
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	JOGGLE BRACKET	NTS
DATE	14.02.12		

0.050 REF

⟨C⟩

1.75
0.72
0.63
0.294

R0.38
TYP

0.75

Ç̶

Ø0.194

BEND LINE (REF)

D3580-1F FLAT PATTERN
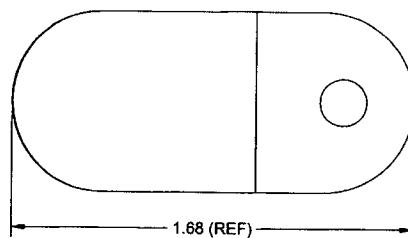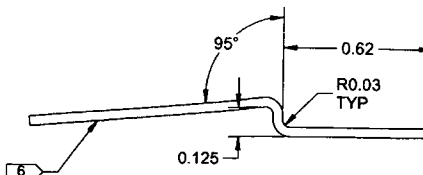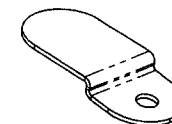
NOTES:
1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 18 GAUGE (0.050 THICK)
        PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
        (REF DART SPEC M304S18GA)
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.01 lbs

APPROVED

DESIGN	AK	**DART AEROSPACE LTD**
DRAWN	AK	HAWKESBURY, ONTARIO, CANADA
CHECKED	VS	DRAWING NO. REV. C
MFG. APPR.	JLM	D3580 SHEET 2 OF 4
APPROVED	HS	TITLE SCALE
DE APPR.	DS	JOGGLE BRACKET NTS
DATE 14.02.12		COPYRIGHT © 2007 BY DART AEROSPACE LTD

95° ⊢— 0.62 —⊣

R0.03
TYP

6

0.125 ⊣

1.68 (REF)

⚠C   **D3580-3 JOGGLE BRACKET**

RELEASE**D**
2014 -07- 02

DESIGN	AK	**DART AEROSPACE LTD**	
DRAWN	AK	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D3580	SHEET 3 OF 4
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	JOGGLE BRACKET	NTS
DATE	14.02.12		

APPROVED

8   7   6   5   4   3   2   1

0.050 REF

1.75

0.294

R0.38
TYP

0.75

C_L

Ø0.194
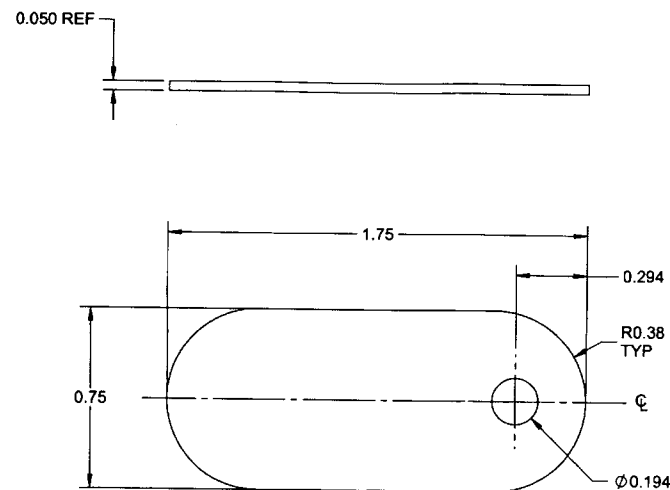
△C D3580-5 BRACKET

NOTES:
1) MATERIAL: MADE FROM D3580-1F
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
7) WEIGHT: 0.01 lbs

APPROVED			
DESIGN	AK	**DART AEROSPACE LTD**	
DRAWN	AK	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D3580	SHEET 4 OF 4
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	JOGGLE BRACKET	NTS
DATE	14.02.12		